

### ***Remarks***

#### ***Status of the Claims***

Claims 1-12 are pending in the application. Claim 1 is amended herein to correct a grammatical error. The amendment does not add new matter.

#### ***The Rejections Under 35 U.S.C. § 112***

Claims 11 and 12 stand rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the enablement requirement. (Office Action, page 2.)

As noted in paragraph 0007 of the specification, a viable sample of strain BRL3946 was deposited with the Agricultural Research Culture Collection (NRRL) under terms of the Budapest Treaty on January 7, 2003 and assigned Accession number NRRL B-30640. As such, upon issuance of a patent, the deposit will become irrevocably available to the public without restriction for 30 years or 5 years after the last request for the enforceable life of the patent and the deposit will be replaced if it should ever become unviable. A copy of the deposit receipt is submitted herein for the Examiner's convenience.

In view of the above, Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

#### ***The Rejections Under 35 U.S.C. § 103***

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Donahue *et al.* (U.S. Patent No. 6,709,854) in view of Hiom *et al.* (*Nucl. Acids Res.*, 19:2502, 1991), Grant *et al.* (*Proc. Natl. Acad. Sci. USA*, 87:4645-4649, 1990) and Swatz *et al.* (U.S. Patent No. 5,342,763). (Office Action, page 2.) Applicants respectfully disagree.

Obviousness is a question of law based on underlying factual inquiries (*Graham v. John Deere Co.*, 383 U.S. 1, 148 (1966)). The factual inquiries listed by the Court are: (A) determining the scope and contents of the prior art; (B) ascertaining the differences between the prior art and the claims in issue; (C) resolving the level of ordinary skill in the pertinent art; and (D) evaluating evidence of secondary considerations. The present claims are directed in part to a bacterium that is capable of being transformed with high efficiency and which allows for transformation by methylated and unmethylated DNA and is resistant to bacteriophage. The Examiner asserts that Donahue *et al.* discloses an *E. Coli* bacteria which comprises an F<sup>+</sup> episome

that confers high efficiency transformability and which has a mutation that allows transformation with unmethylated nucleic acids. (Office Action, page 4.) Hiom *et al.* discusses that mutations in *mcrA* allow for transformation of methylated DNA by reducing restriction of such DNA. Grant *et al.* discusses mutations in *mcrA*, *mcrB* and *mrr* that allow for transformation using methylated DNA and of modified chromosomal DNA. Swartz *et al.* discusses *E. coli* having a mutated or deleted *tonA* gene which confers resistance to infection by certain bacteriophage. However, Hiom *et al.*, Grant *et al.* and Swartz *et al.* do not discuss the efficiency of transformation that is achieved in the mutated strains. Because the cited art does not discuss the presence of high efficiency transformation in combination with mutations allowing for transformation of methylated DNA or resistance to bacteriophage the Examiner has failed to demonstrate each and every element of the claimed invention in the prior art.

The present claims recite a bacterium with “high efficiency transformability.” Without information on the transformation efficiency of the mutated bacteria in the cited art, one of ordinary skill would have no factual basis with which to predict, in the complex biological system of a cell, the efficiency of transformation that would be achieved if the bacteria of Donahue *et al.* were subjected to the combination of mutations discussed in Hiom *et al.*, Grant *et al.* and Swartz *et al.* Without a reasonable expectation of success the Examiner has not established a *prima facie* case of obviousness.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejections based on 35 U.S.C. § 103(a).

***Conclusion***

All of the stated grounds of rejection have been properly traversed or otherwise overcome. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn.

Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

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